# Christian Allen

#### **EDUCATION**

Western Governors University - B.S. in Computer Science Erie Community College - A.S. in General Studies August 2024 May 2020

### **SKILLS**

Languages: C++, CSS, HTML, Java, JavaScript, Python, Scala, SQL

Tools: Angular, Bash, Docker, Git, Hibernate, MySQL, PostgreSQL, REST, Spring Boot

# **PROJECTS**

#### AI Pathfinder

- Achieved accurate player location retrieval using Scala and JavaScript, enhancing functionality for the enemy AI
- Engineered pathfinding algorithms, optimizing AI movement towards target tiles based on the player locations
- Crafted minimal-path computations, streamlining navigation for AI players while avoiding diagonal movements

# Genetic Algorithm

- Utilized Scala to implement methods for statistical computations like average, top K, and standard deviation
- Formulated and executed a Bayesian average algorithm to address biases in user ratings and ranking systems
- Created functions to read song data from CSV files and calculate cost functions for user songs and playlists

# SmartRoute System

- Implemented nearest neighbor algorithm, optimizing package delivery and truck driving mileage by 30 percent
- Integrated a custom hash table for efficient package tracking, enhancing data access and accuracy in real-time
- Developed an intuitive user interface for monitoring delivery, and truck status improving the user experience

## Movie Matcher

- Established a Python-based movie recommendation system using cosine similarity, matching user ratings to film
- Processed and cleaned a dataset of over 50,000+ movies and 100,000+ ratings, optimizing model precision
- Deployed a user-friendly interface, enabling the users to receive the top 5 movies based on their rating history

## **CERTIFICATIONS**

Linux Essentials - Linux Professional Institute

**ITIL 4 Foundation - Axelos** 

#### WORK HISTORY

## **Knab Enterprises -** Sales Manager

September 2021 - Present

Drove sales growth through technical discussion with customers and strategic digital marketing campaigns

## McDonald's - Crew Manager

February 2017 - September 2021

Offered mentorship to 15+ new employees, facilitating smooth operations with effective store management